

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2005-0092

FOR

UNOCAL BULK PLANT #0140
255 HIGHWAY 101
CRESCENT CITY, CALIFORNIA

Del Norte County

MONITORING

1. Prior to purging, the depth to groundwater shall be determined to at least 0.01 foot increments in all groundwater monitoring wells quarterly. The data generated from the elevation readings must be referenced to mean sea level.
2. The water samples collected from monitoring wells MW-1 through MW-8 shall be analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) Total Petroleum Hydrocarbons as diesel (TPHd), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and Methyl tertiary-Butyl Ether (MtBE).
3. Groundwater samples from the monitoring wells used to monitor the ozone remediation system (monitoring wells MW-2, MW-5, MW-6 and MW-7) shall also be collected prior to the beginning of ozone injection, one month after ozone injection begins, and quarterly thereafter for analysis for the following parameters: dissolved oxygen; Oxidation/Reduction Potential (ORP); temperature; pH; bromide; bromate; dissolved hexavalent chromium; dissolved vanadium; dissolved selenium; and dissolved molybdenum. The dissolved oxygen, ORP, temperature, and pH shall be measured in the field. The laboratory reporting limit for hexavalent chromium should be no higher than 5 µg/l and the laboratory reporting limit for bromate should be no higher than 10 µg/l.
4. All laboratory analyses shall be performed at a laboratory certified by the California Department of Health Services.

REPORTING

5. Quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

<u>Reporting Period</u>	<u>Due Date</u>
January, February, March	May 1
April, May, June	August 1
July, August, September	November 1
October, November, December	February 1

6. A groundwater elevation contour map shall be included for each set of measurements and shall include the following:
 - location of the facilities;
 - location of the monitoring wells;
 - location of the former underground tanks; and
 - groundwater flow pattern including the direction of the groundwater gradient.
7. A contamination isogram map shall be included for each significant pollutant detected during the monitoring events and shall include the following:
 - location of the facilities;
 - location of the monitoring wells; and
 - location of the former underground tanks.
8. Current and previous analytical results shall be reported in tables which include the following:
 - sampling point;
 - date of sample collection;
 - constituents and analytical results; and
 - quantification limits employed for non-detect analytical results.
9. Current and previous remedial system operation and maintenance activities shall be reported in the monitoring reports.
10. Each report shall contain copies of the well purging and sampling field logs; chain of custody documents showing the time and date of collection and person collecting; and signed laboratory sheets including quality control data and explanations of analytical anomalies, if any. These supporting documents may be included as appendices to the report.
11. Monitoring data shall also be submitted electronically to the State Water Resources Control Board's GeoTracker database.

Ordered by _____

Catherine Kuhlman
Executive Officer

September 7, 2005